

A COMPARATIVE CLINICAL STUDY ON THE EFFECT OF ASHMARIKHANDANA RASA AND GOMUTRA SHILAJATU IN THE MANAGEMENT OF MUTRASHMARI

DR.CHANDRA BHUSHAN SINHA¹DR.S.K.BANNIGOL²,DR.C.THYAGARAJA³, DR.SIDHANGOUDA.A.PATIL³,DR.PRABHAKAR.H.TASEEN⁴

¹ ASST.PROFESSOR, ²EX-HOD & PROFESSOR, ³ HOD&PROFESSOR, ³ ASSO.PROFESSOR, ⁴ ASSO.PROFESSOR. DEPARTMENT OF SHALYA TANTRA ,
AYURVEDA MAHAVIDHYALAYA HUBLI.

ABSTRACT

Mutrashmari is considered as one among the Asthamahagada told in the Samhita, characterized by cardinal symptoms of Pain, Dysuria, Haematuria, Burning Micturation.

OBJECTIVES: A comparative clinical study on the effect of Ashmarikhandana Rasa and Gomutra Shilajatu in the management of Mutrashmari .

METHODS: Case presenting with classical sign and symptom of Mutrashmari were selected. The formulations Ashmarikhandana Rasa and Gomutra Shilajatu were given to group A and B. Pain, Dysuria, Haematuria, Burning Micturation, Number of stones, Size of stones, Site of stone, Hydroureter and Hydronephrosis were assessed before and after treatment. The duration of the study was two months or upto expulsion of the stone with 1 month of follow up.

Results: Both the formulations have shown highly significant result in reducing subjective parameters and objective parameters. In Group A Ashmarikhandana Rasa was given to 15 patients. In that 75%(marked relief) observed. In Group B Gomutra Shilajatu was given to 15 patients. In that 75%(marked relief) observed.

Conclusion: Both Group A (Ashmarikhandana Rasa) and Group B (Gomutra Shilajatu) have shown highly significant outcomes.

Key words: Mutrashmari, Urinary Calculi, Ashmarikhandana Rasa, Gomutra Shilajatu.

INTRODUCTION

Mutrashmari is the disease of yore. Human beings are suffering from this disease since time immemorial. It is one of the most troublesome diseases of urinary system. It is enlisted as one amongst Astamahagada. . In almost all the Ayurvedic classics Mutrashmari has been dealt in detail in all its aspects such as Nidanapanchaka, Chikitsa,

Sadhyasadhyata and Upadrava etc. Here the management of Mutrashmari consists of Nidana Parivarjana, Shaman Chikitsa.

In this disease Ashma i.e. stone like objects are formed in mutravaha srotas. Vitiated kaphadosha travels in to mutravaha srotas and it is dried by pitta and vayu thus producing Ashmari. The Ashmari will exhibit

sudden and severe pain during micturition. Pain may be seldom associated with hematuria. The Ashmari, if not treated in time, will gradually increase in size and produces obstruction and damage the renal parenchyma. Thus may lead to renal failure. Hence prompt management of this condition is warranted. This condition has striking to, urinary calculus of Modern medical science.

Urinary calculus is a stone like body composed of urinary salts bound together by a colloid matrix of organic salts. Consumption of excessive calcium diet, drinking of hard water, hot climate and metabolic disorder are the contributing factors. It is frequent clinical problem with an incidence about 2 to 4% of world population. It is estimated that about 5 to 7 million patients are suffering from Urinary calculus in India with male to female ratio of 2:1.

MATERIALS

The present study titled "A Comparative Clinical Study On The Effect Of AshmarikhandanaRasa And Gomutra Shilajatu In The Management Of Mutrashmari " is a clinical trial which was done with following materials.

MATERIALS: The following materials were used in the Clinical Trial.

1. Ashmarikhandan Rasa ¹⁵⁰

2. Gomutra Shilajatu ¹⁵¹

Ingredients of medicines used:

Ashmarikhandana Rasa:

1. Palasa / Flame of the forest tree/Muttuga

2. Rambha / Kadali

3. Tila

4. Karavalli / Bitter Guard

5. Yava / Barely

6. Amlika/ Imali

7. Saikharika / Apamarga

8. Haridra

9. Parada

10. Gandhaka

11. Vara Loha Bhasma

The above mentioned ingredients of Ashmarikhandana Rasa for the present study were prepared in Rasashastra department of Ayurveda Mahavidyalaya, Hubli. Shodhana of Shilajatu was also done in Department of Rasashastra of Ayurveda Mahavidyalaya, Hubli.

2. Gomutra Shilajatu. The above mentioned drug of Gomutra Shilajatu for the present study were done in shodhana in Rasashastra department of Ayurveda Mahavidyalaya, Hubli.

METHODOLOGY

Source of Data:

Patients attending the O.P.D. and I.P.D. of Post Graduate Department of Shalya Tantra, Ayurveda Mahavidyalaya Hospital, Hubli, were selected for the study.

Methods of collection of Data

a. A clinical survey of patients attending the OPD and IPD of Post Graduate Department of Shalya Tantra, Ayurveda Mahavidyalaya Hospital, Hubli was made and patients fulfilling the criteria of diagnosis as per the Performa were selected for the study.

b. Clinical evaluation of patients was done by collection of data through history, physical examination, and laboratory tests.

c. Review of literature was collected from Library of Ayurveda Mahavidyalaya, Hubli, and from Authentic Research Journals, Websites, Digital Publications etc.

d. The data which were obtained by the clinical trial were statistically analyzed by applying Student's "t" test . The drugs required for the clinical study was Procured and Prepared in the department of Rasa shastra and Bhaishajya kalpana. A.M.V, Hubli.

Inclusion Criteria:

1. Subjects diagnosed according to classical features, U.S.G. report and routine urine examination were taken.

2. Subjects of the both sex and age group between 16-60 years were selected.

3. Patient with clinical feature of Mutrashmari (Urinary calculus) were selected.

Exclusion Criteria:

1. Subjects with the history of Acute or Chronic renal failure, uncontrolled metabolic disorder, hypertension and any endocrinal diseases were excluded.

2. Subjects with gross hydronephrosis were excluded.

Parameters of Study:

Parameters of assessment were totally based on relief of Symptoms, U.S.G. report.

Subjective Parameters:

1. Dysuria
2. Haematuria
3. Burning micturation
4. Pain

Objective Parameters:

1. Renal angle tenderness
2. Size of calculi assessed by USG
3. Number of calculi assessed by USG.

Study Design:

A comparative clinical study.

Sample size: A Minimum of 30 patients diagnosed as Mutrashmari (Urolithiasis) were selected incidentally and randomly categorized in two groups Group A and Group B each consisting of 15 patients .

CRITERIA FOR ASSESSING THE SUBJECTIVE PARAMETER:

1)Pain

McGill pain score index:

None	- 0
Mild	- 1
Discomforting	- 2
Distressing	- 3
Horrible	- 4
Excruciating	- 5

2)Dysuria –

Nil	- 0
Mild	- 1
Moderate	- 2
Severe	- 3

3)Haematuria –

Nil	- 0
Microscopic	- 1
Macroscopic	- 2
Frank blood	- 3

4)Burning micturation-

Nil	- 0
Mild	- 1
Modrate	- 2
Severe	- 3

Criteria for assessing Objective Parameters-

Renal angle tenderness

Nil –	0
Mild -	1
Moderate –	2
Severe -	3

Size of Calculi-

Nil -	0
0 to 3mm -	1
3 to 6mm -	2
6 to 9mm -	3
9 to 12mm-	4
Above 12mm-	5

No. of Calculi

No Calculi -	0
One Calculi-	1
Two Calculi-	2
Three Calculi-	3
More than three-	4

Assessment criteria:

Complete relief –	100%
Marked relief -	Above 75% improvement
Moderate relief -	50%-75% improvement
Mild relief -	25%-50% Improvement
No relief -	Below 25% improvement

Investigations:

- 1) Blood –
Hb%, T.C, D.C ,ESR,
Sr.Creatinine

Blood Urea

Uric Acid

2) Urine –

Physical examination

Microscopic examination

3) Ultra sonography (Abdomen & Pelvis)

,Plain KUB X-ray.

Interventions.

Physical Examination of urine:-

Red – 3

Yellow – 2

Pale yellow – 1

Normal – 0

Microscopic examination of Urine:-

6 to 5 hpf – 3

4 to 3 hpf – 2

2 to 1 hpf – 1

0 hpf – 0

Group-A

I. Subjects were given Ashmarikhandan Ras 500mg BD, with them they were given Mutrala Kwatha 20ml. They were told to take after food twice.

II. Pathya Ahara and Vihara were advised to the subjects

Duration: 2 Months

Follow up: 1 Month

Group-B

I. Subjects were given Gomutra Shilajathu 500mg BD, with them. They were told to take Mutrala Kwatha

20ml. They were told to take twice daily after food.

II. Pathya Ahara and Vihara were advised to the subjects.

Duration: 2 Months

Follow up: 1 Month

11.Vara Loha Bhasma

Review of Ayurvedic Literature

Vyutpatti Nirukti, Paribhasha and Bheda

VYUTPATTI:

The term Ashmari is derived from the root "Ashu" which has the meaning "Sanghata". When Ashu dhatu is suffixed by main as krit pratayaya it results.

In the derivation of the term Ashman. This is added with Ra to form Ashmara .The streelinga pratayatya added to Ashmara result in the formation of the term Ashmari.

NIRUKTI:

"Ashmanam Rati Dadati Iti Ashmari"
The one which is converted into a hard mass resembling a stone (Ashma) is called Ashmari.

PARIBHASHA:

1.Ashmari Mutra Krichhra Syat (Amarkosha)

2.Asmari Mutra Krichhra Bheda (Ayurvedic Shabdhakosha)

3. Ashmari – Stone, gravel, strangely (Mr. Williams)

By the consolidation of the vitiated mutra in the mutravaha srotas a crystal resembling stone is termed as Ashmari.

BHEDA OF ASHMARI:

All the Acharyas except Charaka have classified the disease Mutrashmari into four types i.e.

- i. Vataj Ashmari
- ii. Pittaj Ashmari
- iii. Shleshmaja Ashmari
- iv. Shukraj Ashmari

Acharya Charaka, Chikista Sthana 26/37, has considered Mutrashmari as a variety under Mutrakruchra and classified it into Mridu Ashmari and Kathina Ashmari on the basis of consistency. Shukraja, Pittaj and Kaphaj varieties are the Mridu where as Vataj variety is Kathina.

ETIOLOGY

The following etiologies are as:

Age:

Urinary stones may occur in any age but it is more common in between the age of 30-50 years.

Sex:

Male are more sufferers than female. The male female ratio is 41:25 (Finlayson 1974). In female, stone

formation is less because of low serum testosterone levels, but children have most common oxalate stones.

Climate:

Hotter areas are more prone to stone formation because of excessive perspiration and fluid loss due to atmospheric temperature which leads to concentrated urine and output may be diminished. In hot and humid climate stone are less common than in hot and dry climate. The seasonal variation in dietary oxalate intake is also an important factor in the formation of stone.

Occupation:

High socioeconomic group and sedentary workers are more prone to the disease. It has been found in a survey that inadequate physical activity and over saturation may be important factors contributing to the formation of many stones. Occupation like cooking, engine room persons etc. may lead to high environmental temperature, which leads to stone formation.

Diet:

Highly rich protein diet, the exact cause and mechanism of stone formation in urinary system is still full of doubts but the following factors

may be responsible for the stone formation viz.

Factors for stone formation:

1. Vit. A deficiency
2. Water intake
3. Inadequate urinary drainage
4. Hyperparathyroidism (Absorption of Calcium increases)
5. Stasis

6. Infection etc.

But it is again controversial because stone may form in presence of above factors and on the other hand stone may not form in the presence of such factors. The exact cause and mechanism of their formation is still uncertain.

OBSERVATIONS

In this study on Mutrashmari, 30 subjects were registered. Out of them 15 subjects were treated under Group A, and 15 subjects under Group B. Irrespective of the Groups under which the subjects were treated, the observation according to the age, sex, occupation etc. are given hence forth.

Table No. Showing Age wise distribution of 30 Subjects of Mutrashmari .

Age	Group A	Group A%	Group B	Group B%	Total	%
16-30	1	6.66%	1	6.66%	2	6.66%
31-45	7	46.67%	4	26.67%	11	36.67%
46-60	7	46.67%	10	66.67%	17	56.67%

During the clinical study on management of Mutrashmari by Ashmarikhandana Rasa and Gomutra Shilajatu out of 30 patients studied, a maximum No. Of 17 subjects [56.67%] were between 46 - 60 years, 11 subjects [36.67%] were between 31 -45 years and 2 subjects [6.66%] were between 16 – 30 years.

Table No. Showing Sex wise distribution of 30 Subjects of Mutrashmari .

Sex	Group A	Group A%	Group B	Group B%	Total	%
male	8	53.33%	10	66.67%	18	60%
female	7	46.67%	5	33.37%	12	40%

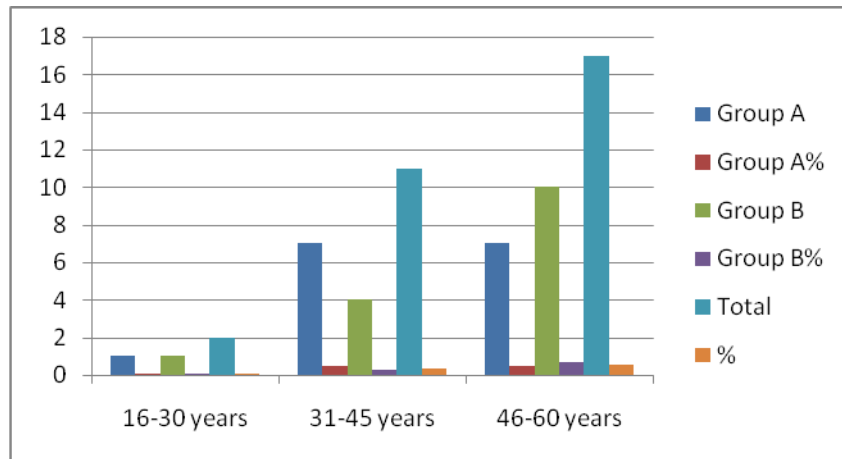
In the present study 18 male [60%] and 12 female [40%] patients were registered.

Observation Graphs

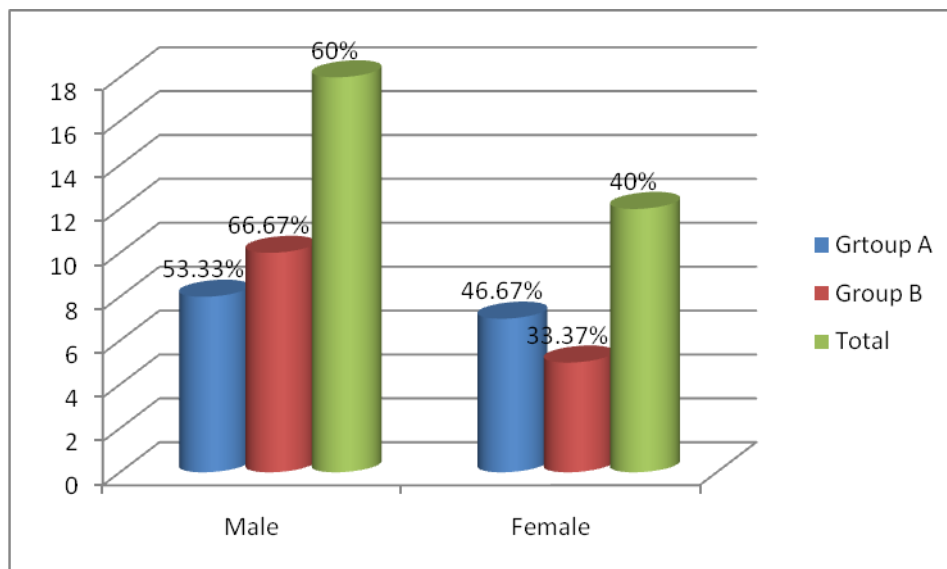
In this study on Mutrashmari, 30 subjects were registered. Out of them 15 subjects were treated under Group A, and 15 subjects under Group B. Irrespective of the

Groups under which the subjects were treated, the observation according to the age, sex, occupation etc. are given hence forth.

Graph No. 1 Showing Age wise distribution of 30 Subjects of Mutrashmari



Graph No.2 Showing Sex wise distribution of 30 Subjects of Mutrashmari



RESULTS

The item of information obtained by experiment are results, results are the outcome of systematic work done during the clinical trial. The results are directly reciprocal to the scientific research done by the scholar, here in this present study titled "A

Comparative Clinical Study On the effect of Ashmarikhandana Rasa and Gomutra Shilajatu in the management of Mutrashmari" the results were drawn as below.

EFFECT OF THERAPY:

SUBJECTIVE PARAMETERS

A COMPARATIVE CLINICAL STUDY ON THE EFFECT OF ASHMARIKHANDANA RASA AND GOMUTRA SHILAJATU IN THE MANAGEMENT OF MUTRASHMARI

1. Effect of therapy on Subjective parameters such as Pain, Dysuria, Haematuria, Burning Micturation.were assessed and obtained results were Statistically analyzed by applying student 't' test. i.e

- 1) Within the groups
- 2) Between the groups

In this present clinical study 30 subjects were registered based on the inclusion criteria and categorized into 2 groups.

TABLE COMPARATIVE EFFICACY OF THERAPIES ON SUBJECTIVE PARAMETERS:

Showing the Comparative efficacy of the therapies in Group A and Group B by using unpaired 't' test											
Sl. No.	Parameters of Assessment	No. of Pts	Group A			Group B			't'	P	Remarks
			Mean	S.D. (±)	S.E. (±)	Mean	S.D. (±)	S.E. (±)			
1	Pain	30	2.934	1.387	0.358	2.993	1.032	0.266	0.132	=0.8985	NS
2	Dysuria	30	2	0.755	0.195	1.934	0.883	0.228	0.219	=0.8275	NS
3	Haematuria	30	1.733	0.798	0.206	2.333	0.975	0.251	1.843	=0.0758	NS
4	Burning Micturation	30	2.132	0.743	0.191	2	0.755	0.195	0.485	=0.6313	NS

The mean of pain in Group A was 2.934, SD was 1.387 and SE was 0.358 and In Group B, the mean was 2.993 , SD was 1.032 and SE was 0.266. The comparative efficacy of Group A with Group B showed Statistically not Significant (p = 0.8985) result with't' value of 0.132.

TABLE COMPARATIVE EFFICACY OF THERAPIES OBJECTIVE PARAMETERS:

Showing the Comparative efficacy of the therapies in Group A and Group B by using unpaired 't' test											
Sl. no.	Parameter of assessment	No. of pts.	Group A			Group B			't'	P	Remarks
			mean	S.D	S.E	mean	S.D	S.E			

A COMPARATIVE CLINICAL STUDY ON THE EFFECT OF ASHMARIKHANDANA RASA AND GOMUTRA SHILAJATU IN THE MANAGEMENT OF MUTRASHMARI

1	Renal angle tenderness	15	1.866	0.639	0.165	1.933	1.161	0.300	0.1958	=0.8462	NS
2	Size of calculi	15	2.734	1.437	0.371	2.464	1.457	0.376	0.5110	=0.6134	NS
3	No. of calculi	15	2.734	1.437	0.371	2	0.845	0.218	1.7053	=1.7053	NS

ASSESSMENT OF RESULTS-OVERALL RESPONSE ON PARAMETERS:

**Total Response of Therapy in Group A and Group B:
(Comparison between Group A and Group B)**

Relief	SUBJECTIVE PARAMETERS					
	Group A			Group B		
	No. of pts	%	Remarks	No. of pts	%	Remarks
Lessthan 25%	0	00.00	No relief	0	00.00	No relief
25% to 50%	0	00.00	Mild relief	0	00.00	Mild relief
50% to 75%	0	00.00	Moderate relief	0	00.00	Moderate relief
Above 75%	15	100	Marked relief	15	100	Marked relief

Subjective Parameters shows in this study Out of 15 subjects in Group A, 15 (100%) subjects showed Marked relief, No subjects showed Moderate relief, No subject showed Mild relief and No Relief.

Out of 15 subjects in Group B, 15 (100%) subjects showed Moderate relief, No subjects showed Marked relief, No subject showed Mild relief and No Relief.

DISCUSSION ON RESULTS: In this study the effect of treatment was assessed on the basis of changes observed after the treatment in Subjective and Objective parameters.

The results are discussed parameter wise as here under:

DISCUSSION ON RESULTS OF SUBJECTIVE PARAMETERS:

1. Discussion on Pain: In Vedana the % relief provided by Group A was 86.27% and in Group B 95%. The results of both groups were statistically highly significant with p value (P<0.0001).

2. Discussion on Dysuria: In Dysuria the % relief provided by Group A was 90.90 % and in Group B 87.87%. The results of both groups were statistically highly significant with p value (p<0.0001).

3. Discussion on Haematuria: In Haematuria the % relief provided by Group A was 89.65% and in Group B 94.59%. The result of both groups were statistically highly significant with p value ($p < 0.0001$).

4. Discussion on Burning Micturation: In Burning Micturation the % relief provided by Group A was 94.11% and in Group B 100%. The result of both groups were highly statistically significant with p value ($p < 0.0001$).

DISCUSSION ON RESULTS OF OBJECTIVE PARAMETERS:

In the present study in both the groups there is a marked decrease in the number of stones almost above 75% of the stones expelled after the complete therapy. And with the expulsion of stones both Hydronephrosis and Hydroureter got relieved.

CONCLUSION

Conclusion is the outcome of clinical research work carried out. The same has been depicted as under:

1. Based on Nidana Panchaka and Chikitsa, Mutrashmari can be correlated to Urolithiasis of modern science.
2. Out of 30 patients of Mutrashmari included in this study, 15 patients

were treated with Ashmarikhandana Rasa under group A and 15 patients were treated with Gomutra Shilajatu under group B.

3. In both group Mutrara Kwatha is given as anupana.
4. It is evident that Mutrashmari is found to be more prevalent in between 41 to 60 yrs of age and in males.
5. It is evident that incident of Mutrashmari is common in all the religion, rural / urban people and in all types of occupation.
6. It is clearly evident that subjects belonging to sedentary type of work, middle class, married and mixed diet people are prone to Mutrashmari.
7. It is found that habits are not responsible for Mutrashmari.
8. It is evident that subjects who commit Manasik karana like chinta etc are prone for Mutrashmari.
9. It is found that subjects committing Lavana, Katu and Tikta rasa pradhana Ahara are prone for Mutrashmari.
10. It is evident that Mutrashmari is prevalent in the subjects with Mandagni, Madhyama Koshta and Dwandhaja Prakruti.
11. It is evident that majority of subjects were having solitary (single) stones, 6

to 8 mm size and distributed evenly both renal and ureteric sites.

12. It was found that majority of subjects were found to have Hydronephrosis and Hydroureter. But disappeared after commencing treatment.
13. It is evident that the effect of therapy was highly significant in Dysuria, Haematuria and Burning Micturation.
14. It is evident that the therapy was found to be very effective in eliminating above 75% of stones. Marked relief, in both Group A & Group B. (Ashmarikhandana Rasa and Gomutra Shilajatu).

REFERENCES

1. Agnivesha; Charaka Samhita, Elaborated by Charaka and Dradabala Edited with Charak Chandrika Hindi commentary by Brahmanand Tripathi, Reprint Edition, Chaukambha Surbharati Prakashan, Varanasi. 2005
2. Amarasinha Kritha Amarakosh; with Ramasrani commentary of Bhanuji Diksita, Edited with the easy Maniprabha Hindi Commentary by Haragovinda Shastri; Chaukambha

Sanskrit Samsthan, Varanasi; Reprint Edition, 2008.

3. A Concise Text Book of Surgery, Editor S. Das, 3rd Edition, 2004, published by S. Das, Calcutta-700005.
4. Bhava Prakasha, Editor, Sri Brahmsankara Mishra Part-2 11th Edition, Chaukambha Sanskrit Bhawan, Varanasi 2010
5. Dr. Indra deva tripathi, Dr. Daya Shankar tripathi, Yogaratnakara, 2nd edition. Chaukambha Krishna das academy, Varanasi, 2007.
6. Dravya Guna Vijnana, By. Dr. J.L.N. Shashtri, 3 Edition, 2008, Published: Chaukambha Orientalia Varanasi, 2008.
7. Database on Medicinal Plant, By. Aruna Joshi, P. B. Singh, Prakashana: Documentation and Publication Division Central Council for Research in Ayurveda. 2005, New Delhi- 110058 .
8. Kayachikitsa- Dr. Shivacharan Dhyani, Pg No. 202, 285 Chaukambha Orientalia, Varanasi.

Source of Support: NIL
Conflict of Interest : None declared

Corresponding author:

DR. CHANDRA BHUSHAN SINHA
ASST. PROFESSOR, DEPARTMENT OF SHALYA
TANTRA, AYURVEDA MAHAVIDHYALAYA HUBLI
Email: bhushanchandra16@gmail.com